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#42	Search cyclosporin and mitochondrial calcium	17:37:30	519
#41	Search cyclosporin and mitochondrial calcium	17:37:00	0
#39	Search cyclosporin and calcium influx	17:36:06	120
#38	Search cyclosporin and calcium modulator	17:30:29	20
#37	Search cyclosporin and calcium	17:29:25	2054
#28	Search recombinant HCV protein E1 Limits: Publication Date to 1994/07/29	10:54:28	12
#25	Search yeast and recombinant HCV protein Limits: Publication Date to 1994/07/29	10:48:19	4
#23	Search vaccinia vector and recombinant HCV protein Limits: Publication Date to 1994/07/29	10:46:56	2
#21	Search vaccinia and HCV envelope protein Limits: Publication Date to 1994/07/29	10:46:10	2
#19	Search vector and HCV envelope protein Limits: Publication Date to 1994/07/29	10:27:07	1
#18	Search vector and HCV Limits: Publication Date to 1994/07/29	10:26:54	14
#17	Search recombinant HCV envelope protein Limits: Publication Date to 1994/07/29	10:15:21	5
#16	Search maeten G and HCV envelope protein Limits: Publication Date to 1994/07/29	10:15:01	1
#15	Search maeten G and HCV Limits: Publication Date to 1994/07/29	10:14:45	90
#14	Search maeten G Limits: Publication Date to 1994/07/29	10:14:36	261176
#13	Search Field: All Fields, Limits: Publication Date to 1994/07/29	10:14:12	10153276
#10	Search maertens g and hcv and e1 Limits: Publication Date to 1996/03/11	10:07:36	3
#9	Search maerten G and HCV and E1 Limits: Publication Date to 1996/03/11	10:07:33	0
#8	Search maerten G and HCV envelope protein E1 Limits: Publication Date to 1996/03/11	10:07:17	0
#7	Search recombinant HCV envelope protein E1 Field: All	10:06:19	1

Fields, Limits: Publication Date to 1996/03/11		
#6 Search recombinant HCV envelope protein E1 Field: All	10:05:18	<u>1</u>
Fields, Limits: Publication Date to 1994/07/29		
#4 Search Koziel M. 1992	10:03:43	<u>4</u>
#3 Search Koziel A 1992	10:03:29	<u>0</u>
#1 Search Koziel 1993 and HCV	10:01:16	<u>1</u>

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NEWS	16	APR 28	Improved searching of U.S. Patent Classifications for U.S. patent records in CA/CAPLUS
NEWS	17	MAY 23	GBFULL enhanced with patent drawing images
NEWS	18	MAY 23	REGISTRY has been enhanced with source information from CHEMCATS
NEWS	19	JUN 06	The Analysis Edition of STN Express with Discover! (Version 8.0 for Windows) now available
NEWS	20	JUN 13	RUSSIAPAT: New full-text patent database on STN
NEWS	21	JUN 13	FRFULL enhanced with patent drawing images
NEWS	22	JUN 27	MARPAT displays enhanced with expanded G-group definitions and text labels
NEWS	23	JUL 01	MEDICONF removed from STN
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=> HBV

7924 HBV

57 HBVS

L1 7940 HBV

(HBV OR HBVS)

=> cyclosporin and L1

0 CYCLOSPORIN

L2 0 CYCLOSPORIN AND L1

=> cyclosporin

14964 CYCLOSPORIN

372 CYCLOSPORINS

L3 14999 CYCLOSPORIN

(CYCLOSPORIN OR CYCLOSPORINS)

=> L1 and L3

L4 8 L1 AND L3

=> calcium and L4

727049 CALCIUM

32 CALCIUMS

727052 CALCIUM

(CALCIUM OR CALCIUMS)

L5 1 CALCIUM AND L4

=> EGTA and L1

12514 EGTA

1 EGTAS

12514 EGTA

(EGTA OR EGTAS)

L6 1 EGTA AND L1

=> BAPTA and L1

2813 BAPTA

1 BAPTAS

```

2814 BAPTA
      (BAPTA OR BAPTAS)
L7      1 BAPTA AND L1

=> nifedipine and L1
      13397 NIFEDIPINE
L8      1 NIFEDIPINE AND L1

=> nimodipine and l1
      2859 NIMODIPINE
L9      0 NIMODIPINE AND L1

=> felodipine and L1
      1240 FELODIPINE
L10     0 FELODIPINE AND L1

=> isadipine and l1
      0 ISADIPINE
L11     0 ISADIPINE AND L1

=> nicardipine and l1
      3013 NICARDIPINE
      2 NICARDIPINES
      3013 NICARDIPINE
      (NICARDIPINE OR NICARDIPINES)
L12     0 NICARDIPINE AND L1

=> nosoldipine and l1
      1 NOSOLDIPINE
L13     0 NOSOLDIPINE AND L1

=> nisodipine and l1
      5 NISODIPINE
L14     0 NISODIPINE AND L1

=> benzothiazepine and l1
      1122 BENZOTHIAZEPINE
      541 BENZOTHIAZEPINES
      1300 BENZOTHIAZEPINE
      (BENZOTHIAZEPINE OR BENZOTHIAZEPINES)
L15     1 BENZOTHIAZEPINE AND L1

=> phenylakylamine and l1
      9 PHENYLAKYLAMINE
      9 PHENYLAKYLAMINES
      17 PHENYLAKYLAMINE
      (PHENYLAKYLAMINE OR PHENYLAKYLAMINES)
L16     0 PHENYLAKYLAMINE AND L1

=> verapamill and l1
      1 VERAPAMILL
L17     0 VERAPAMILL AND L1

=> diarylaminoprophylamine and l1
      0 DIARYLAMINOPROPHYLAMINE
L18     0 DIARYLAMINOPROPHYLAMINE AND L1

=> bepridili and L1
      0 BEPRIDILI
L19     0 BEPRIDILI AND L1

=> omega-agatoxin and l1
      169079 OMEGA
      12 OMEGAS
      169083 OMEGA
      (OMEGA OR OMEGAS)
      737 AGATOXIN
      39 AGATOXINS
      752 AGATOXIN

```

(AGATOXIN OR AGATOXINS)
 692 OMEGA-AGATOXIN
 (OMEGA(W)AGATOXIN)
 L20 0 OMEGA-AGATOXIN AND L1
 => omega-agatoxin and calcium
 169079 OMEGA
 12 OMEGAS
 169083 OMEGA
 (OMEGA OR OMEGAS)
 737 AGATOXIN
 39 AGATOXINS
 752 AGATOXIN
 (AGATOXIN OR AGATOXINS)
 692 OMEGA-AGATOXIN
 (OMEGA(W)AGATOXIN)
 727049 CALCIUM
 32 CALCIUMS
 727052 CALCIUM
 (CALCIUM OR CALCIUMS)
 L21 665 OMEGA-AGATOXIN AND CALCIUM

=> L21 and l1
 L22 0 L21 AND L1

=> amilorid and calcium
 8 AMILORID
 727049 CALCIUM
 32 CALCIUMS
 727052 CALCIUM
 (CALCIUM OR CALCIUMS)
 L23 1 AMILORID AND CALCIUM

=> L23 and L1
 L24 0 L23 AND L1

=> MAPTAM and l1
 30 MAPTAM
 L25 0 MAPTAM AND L1

=> calcium (s) inhibitor
 727049 CALCIUM
 32 CALCIUMS
 727052 CALCIUM
 (CALCIUM OR CALCIUMS)
 478437 INHIBITOR
 492791 INHIBITORS
 763351 INHIBITOR
 (INHIBITOR OR INHIBITORS)
 L26 11155 CALCIUM (S) INHIBITOR

=> L1 and l26
 L27 5 L1 AND L26

=> D L5 IBIB ABS 1-5

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2002:294165 CAPLUS
 DOCUMENT NUMBER: 136:304036
 TITLE: Inhibition of the Src kinase family pathway as a
 method of treating HBV infection and
 hepatocellular carcinoma
 INVENTOR(S): Schneider, Robert J.; Klein, Nicola
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 37 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002045191	A1	20020418	US 2001-955006	20010917

PRIORITY APPLN. INFO.: US 2000-232892P P 20000915

AB The present invention relates to therapeutic protocols and pharmaceutical compns. designed to target HBx mediated activation of Src kinase, members of the Src tyrosine kinase family and components of the Src kinase family signal transduction pathways for the treatment of **HBV** (hepatitis B virus) infection and related disorders and diseases, such as hepatocellular carcinoma (HCC). The invention further relates to pharmaceutical compns. for the treatment of **HBV** infection targeted to HBx and its essential activities required to sustain **HBV** replication. The invention is based, in part, on the Applicants' discovery that activation of Src kinase signaling cascades play a fundamental role in mammalian hepadnavirus replication. Applicants have demonstrated that HBx mediates activation of the Src family of kinases and that this activation is a critical function provided by HBx for mammalian hepadnavirus replication.

=> D L27 IBIB ABS 1-5

L27 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:639135 CAPLUS

DOCUMENT NUMBER: 142:131910

TITLE: Hepatic cell apoptosis was triggered by HBx accumulation and independent on verapamil

AUTHOR(S): Wang, Haiping; Chen, Xiaoping; Bai, Xiangjun

CORPORATE SOURCE: Department of Surgery, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, 430030, Peop. Rep. China

SOURCE: Journal of Huazhong University of Science and Technology, Medical Sciences (2004), 24(3), 281-283
CODEN: JHUSAW; ISSN: 1672-0733

PUBLISHER: Huazhong University of Science and Technology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB To study the roles of HBx and **calcium inhibitor** verapamil in apoptosis of human normal hepatic cells, L02-off, a pTet-off stably integrated human hepatic cell line was established, in which HBx expression was tightly induced by Doxycycline. The effect of different amts. of HBx and verapamil on apoptosis of human normal hepatic cells was detected. The study showed that apoptosis was triggered by accumulation of intracellular HBx, while verapamil had no effects on the apoptotic process. It was concluded that apoptosis mediated by HBx was dose-dependent but calcium-independent.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:567220 CAPLUS

DOCUMENT NUMBER: 141:290790

TITLE: Screening of lymphocyte proteins interacting with hepatitis B virus X antigen by yeast-two hybrid technique

AUTHOR(S): Liang, Yaodong; Cheng, Jun; Li, Qiang; Wang, Lin; Lu, Yinying; Wu, Jun; Cheng, Mingliang

CORPORATE SOURCE: Institute of Infectious Diseases, The 302 Hospital of PLA, Beijing, 100039, Peop. Rep. China

SOURCE: Shijie Huaren Xiaohua Zazhi (2003), 11(12), 1866-1869
CODEN: SHXZF2; ISSN: 1009-3079

PUBLISHER: Shijie Weichangbingxue Zazhishe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB Methods: The hepatitis B virus X antigen (HBxAg) gene was amplified by polymerase chain reaction (PCR) and HBxAg bait plasmid was constructed by using yeast-two hybrid system 3, then transformed into yeast AH109. The

transformed yeast mated with yeast Y187 containing lymphocytes cDNA library plasmid in 2+YPDA medium. Diploid yeast was plated on synthetic dropout nutrient medium (SD/-Trp-Leu-His-Ade) and synthetic dropout nutrient medium (SD/-Trp-Leu-His-Ade) containing X- α -gal for selecting two times and screening. After extracting and sequencing of plasmid from blue colonies, we underwent anal. by bioinformatics. Results: A total of 50 colonies were sequenced. Among them, 20 colonies were eukaryotic translation elongation factor 2, 1 eukaryotic translation elongation factor 1, 2 eukaryotic translation initiation factor 3, 2 protein MTGR1a, 1 myeloid associated differentiation protein, 1 myeloid differentiation primary response protein MYD116, 1 CTCL tumor antigen HD-CL-08, 3 MHC class Ib antigen (HLA-E), 1 leukocyte antigen CD37, 1 aCLL-associated antigen KW-6, 1 lymphocyte function-associated antigen 1, 1 growth arrest and DNA-damage-inducible 34, 2 transcript variant 1, 1 protein phosphatase 1, regulatory **inhibitor** subunit 15 A, 1 cytidine deaminase, 1 macrophage lectin 2 (**calcium** dependent) (HML2), 3 KIAA1949 protein, 1 urokinase-type plasminogen activator receptor, 3 GDP dissociation **inhibitor**, 1 chondroitin 4-sulfotransferase, 1 zinc finger protein, subfamily 1A and a new gene with unknown function. Conclusion: Genes of HBxAg-interacting proteins in lymphocytes are successfully cloned and the results bring some new clues for studying the biol. functions of HBxAg and associated proteins.

L27 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:570687 CAPLUS

DOCUMENT NUMBER: 139:112744

TITLE: Transgenic mouse models for screening for inhibitors of hepatitis B virus

INVENTOR(S): Macejak, Dennis; Lee, Patrice

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 37 pp., Cont.-in-part of Appl. No. PCT/US02/09187.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 170

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003140362	A1	20030724	US 2002-279401	20021024
AU 9851819	A1	19980611	AU 1998-51819	19980112
AU 729657	B2	20010208		
AU 9939188	A1	19990916	AU 1999-39188	19990713
AU 769175	B2	20040115	AU 2000-56616	20000911
WO 2002081494	A1	20021017	WO 2002-US9187	20020326

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2001-296876P	P	20010608
US 2001-335059P	P	20011024
WO 2002-US9187	A2	20020326
AU 1995-26422	A3	19950518
US 1996-623891	A	19960325
AU 1996-76662	A3	19961025
US 2001-817879	A	20010326
US 2001-877478	A	20010608
US 2001-337055P	P	20011205

AB The present invention relates to compds., compns., and methods for the study, diagnosis, and treatment of disease states related to hepatitis B virus (HBV) replication and gene expression. HBV animal models and methods of use are provided, including methods of

screening for compds. and/or potential therapies directed against
HBV:

L27 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:526751 CAPLUS
DOCUMENT NUMBER: 139:173263
TITLE: Activation and inhibition of cellular calcium and
tyrosine kinase signaling pathways identify targets of
the HBx protein involved in hepatitis B virus
replication
AUTHOR(S): Bouchard, Michael J.; Puro, Robyn J.; Wang, Lihua;
Schneider, Robert J.
CORPORATE SOURCE: Department of Microbiology, New York University School
of Medicine, New York, NY, 10016, USA
SOURCE: Journal of Virology (2003), 77(14), 7713-7719
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Human hepatitis B virus (HBV) HBx protein is a multifunctional
protein that activates cellular signaling pathways and is thought to be
essential for viral infection. Woodchuck HBV mutants that lack
HBx are unable to replicate in vivo or are severely impaired. HBV
replication in HepG2 cells, a human hepatoblastoma cell line, is
stimulated 5- to 10-fold by HBx protein. We have utilized the HepG2,
HBx-dependent HBV replication system to study the effects of
activators and inhibitors of cytosolic calcium and
tyrosine kinase signaling pathways on viral replication. By transfecting
either a wild-type HBV genome or an HBV genome that
does not express HBx and then treating transfected cells with activators
or inhibitors of signaling pathways, we identified compds. that either
impair wild-type HBV replication or rescue HBx-deficient
HBV replication. Geldanamycin or herbimycin A, tyrosine kinase
inhibitors, blocked HBV replication. Derivs. of cyclosporine,
i.e., cyclosporine A, cyclosporine H, and SDZ NIM811, which block
cytosolic calcium signaling and specifically the mitochondrial
permeability transition pore (SDZ NIM811), also impaired HBV
replication. Treatment of cells with compds. that increase cytosolic
calcium levels by a variety of mechanisms rescued replication of an
HBx-deficient HBV mutant. Transcription of viral RNA and production
of viral capsids were only minimally affected by these treatments. These
results define a functional signaling circuit for HBV
replication that includes calcium signaling and activation of cytosolic
signaling pathways involving Src kinases, and they suggest that these
pathways are stimulated by HBx acting on the mitochondrial transition
pore.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:294165 CAPLUS
DOCUMENT NUMBER: 136:304036
TITLE: Inhibition of the Src kinase family pathway as a
method of treating HBV infection and
hepatocellular carcinoma
INVENTOR(S): Schneider, Robert J.; Klein, Nicola
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 37 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002045191	A1	20020418	US 2001-955006	20010917
PRIORITY APPLN. INFO.:			US 2000-232892P	P 20000915

AB The present invention relates to therapeutic protocols and pharmaceutical

comps. designed to target HBx mediated activation of Src kinase, members of the Src tyrosine kinase family and components of the Src kinase family signal transduction pathways for the treatment of HBV (hepatitis B virus) infection and related disorders and diseases, such as hepatocellular carcinoma (HCC). The invention further relates to pharmaceutical comps. for the treatment of HBV infection targeted to HBx and its essential activities required to sustain HBV replication. The invention is based, in part, on the Applicants' discovery that activation of Src kinase signaling cascades play a fundamental role in mammalian hepadnavirus replication. Applicants have demonstrated that HBx mediates activation of the Src family of kinases and that this activation is a critical function provided by HBx for mammalian hepadnavirus replication.

=> HBx and calcium

823 HBX

727049 CALCIUM

32 CALCIUMS

727052 CALCIUM

(CALCIUM OR CALCIUMS)

L28 21 HBX AND CALCIUM

=> D L28 IBIB ABS 1-21

L28 ANSWER 1 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:271102 CAPLUS

DOCUMENT NUMBER: 142:422884

TITLE: Inhibitory effect of cyclosporine A on hepatitis B virus replication in vitro and its possible mechanisms

AUTHOR(S): Xia, Wei-Liang; Shen, Yan; Zheng, Shu-Sen

CORPORATE SOURCE: Department of Hepatobiliary Surgery, First Affiliated Hospital, Zhejiang University School of Medicine, Hangzhou, 310003, Peop. Rep. China

SOURCE: Hepatobiliary & Pancreatic Diseases International (2005), 4(1), 18-22

CODEN: HPDIAJ; ISSN: 1499-3872

PUBLISHER: First Affiliated Hospital, Zhejiang University School of Medicine

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. BACKGROUND: Hepatitis B related end-stage liver disease is recently acknowledged as one of the main indications for orthotopic liver transplantation (OLT). However, the high recurrence rate of hepatitis B virus infection following transplantation is regarded as a major factor affecting the long-term survival of transplant recipients especially in China. Cyclosporine A (CsA), which is routinely used to prevent the allograft rejection, is reported to have the inhibitory activity on hepatitis B virus (HBV) replication in vitro. In this paper, we review the inhibitory effect and its possible mechanisms of CsA on HBV replication in vitro. DATA RESOURCES: An English-language literature search was conducted using MEDLINE (1990-2004) on cyclosporine A, hepatitis B virus, mitochondria, **calcium** and other related reports and review articles. RESULTS: Hepatitis B x protein (HBx) is essential to HBV replication. The cytosolic **calcium** signaling mediated by mitochondria and the Src kinase pathway were involved during HBx activation of HBV replication. CsA inhibits the HBV replication in vitro by its binding to mitochondrial cyclophilin D, then blocking the mitochondria-mediated cytosolic **calcium** signaling. The derivatives of CsA also have the HBV replication inhibitory effect in vitro. CONCLUSIONS: By interacting with mitochondria, preventing the release of intramitochondrial **calcium**, and then blocking the cytosolic **calcium** signaling, CsA inhibits the HBV replication in vitro. The derivatives of CsA also have this activity.

REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 2 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:248644 CAPLUS

DOCUMENT NUMBER: 142:274057
 TITLE: Sequences of human schizophrenia related genes and use for diagnosis, prognosis and therapy
 INVENTOR(S): Liew, Choong-chin
 PATENT ASSIGNEE(S): Chondrogene Limited, Can.
 SOURCE: U.S. Pat. Appl. Publ., 156 pp., Cont.-in-part of U.S. Ser. No. 802,875.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 43
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004241727	A1	20041202	US 2004-812731	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2004241727	A1	20041202	US 2004-812731	20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P 19990106
			US 2000-477148	B1 20000104
			US 2002-268730	A2 20021009
			US 2003-601518	A2 20030620
			US 2004-802875	A2 20040312
			US 2004-812731	A 20040330

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring diseases using gene-specific and/or tissue-specific primers. The present invention also describes methods by which delineation of the sequence and/or quantitation of the expression levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

L28 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:248643 CAPLUS
 DOCUMENT NUMBER: 142:274056
 TITLE: Sequences of human schizophrenia related genes and use for diagnosis, prognosis and therapy
 INVENTOR(S): Liew, Choong-Chin
 PATENT ASSIGNEE(S): Chondrogene Limited, Can.
 SOURCE: U.S. Pat. Appl. Publ., 156 pp., Cont.-in-part of U.S. Ser. No. 802,875.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 43
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004241727	A1	20041202	US 2004-812731	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2004241727	A1	20041202	US 2004-812731	20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P 19990106
			US 2000-477148	B1 20000104
			US 2002-268730	A2 20021009
			US 2003-601518	A2 20030620
			US 2004-802875	A2 20040312
			US 2004-812731	A 20040330

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring diseases using gene-specific and/or tissue-specific primers. The present invention also describes methods by which delineation of the sequence and/or quantitation of the expression levels of disease-specific genes allows for an immediate and accurate

diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L28 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:67524 CAPLUS

DOCUMENT NUMBER: 142:312974

TITLE: **Calcium** ions affect the Hepatitis B virus core assembly

AUTHOR(S): Choi, Yongwook; Park, Sung Gyoo; Yoo, Jun-Hi; Jung, Guhung

CORPORATE SOURCE: School of Biological Sciences, Seoul National University, Seoul, 151-742, S. Korea

SOURCE: Virology (2005), 332(1), 454-463
CODEN: VIRLAX; ISSN: 0042-6822

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Previous report showed that cytosolic Ca²⁺ induced by hepatitis B virus X protein (**HBx**) promotes HBV replication. In this study, in vitro expts. showed that (i) HBV core assembly in vitro was promoted by Ca²⁺ through the sucrose d. gradient and the anal. ultracentrifuge anal. Also, (ii) transmission electron microscope anal. demonstrated these assembled HBV core particles were the capsids. Ex vivo expts. showed that the treatment of BAPTA-AM and cyclosporine A (CsA) reduced HBV capsids in the transfected HepG2 cells. In addition to that, the treatment of Thapsigargin (TG) increased HBV capsids in the transfected HepG2 cells. Furthermore, we investigated the increased HBV core assembly by **HBx**. The results show that the increased cytosolic **calcium** ions by **HBx** promote the HBV core assembly.

REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 5 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:60754 CAPLUS

Correction of: 2004:1036571

DOCUMENT NUMBER: 142:233342

Correction of: 142:16836

TITLE: Sequences of human schizophrenia related genes and use for diagnosis, prognosis and therapy

INVENTOR(S): Liew, Choong-Chin

PATENT ASSIGNEE(S): Chondrogene Limited, Can.

SOURCE: U.S. Pat. Appl. Publ., 156 pp., Cont.-in-part of U.S. Ser. No. 802,875.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 43

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004241727	A1	20041202	US 2004-812731	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2004241727	A1	20041202	US 2004-812731	20040330
US 2004241727	A1	20041202	US 2004-812731	20040330
US 2004265869	A1	20041230	US 2004-812716	20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P 19990106
			US 2000-477148	B1 20000104
			US 2002-268730	A2 20021009
			US 2003-601518	A2 20030620
			US 2004-802875	A2 20040312
			US 2004-812731	A 20040330

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring diseases using gene-specific and/or tissue-specific primers. The present invention also describes methods by which

delineation of the sequence and/or quantitation of the expression levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L28 ANSWER 6 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:17963 CAPLUS
DOCUMENT NUMBER: 142:427440
TITLE: Progress of study on biological characteristics of
HBx protein
AUTHOR(S): Shen, Hui
CORPORATE SOURCE: Second Clinical Medical College, Shanxi Medical
University, Taiyuan, 030001, Peop. Rep. China
SOURCE: Shanxi Yike Daxue Xuebao (2004), 35(2), 189-191
CODEN: SDXYF5; ISSN: 1007-6611
PUBLISHER: Shanxi Yike Daxue Xuebao Bianjishi
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Chinese

AB A review discusses the roles of hepatitis B virus (HBV) X protein (**HBx**) in the carcinogenesis of HBV with three subdivision headlines: (1) **HBx** and proteasome complex; (2) **HBx** and signal transduction of PI3-K (phosphatidylinositol-3 kinase) and **calcium**; (3) effects of **HBx** on cell migration and invasive phenotypes of tumor.

L28 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:836078 CAPLUS
DOCUMENT NUMBER: 142:33552
TITLE: Nuclear respiratory factor 1 plays an essential role in transcriptional initiation from the hepatitis B virus X gene promoter
AUTHOR(S): Tokusumi, Yumiko; Zhou, Sharleen; Takada, Shinako
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, Genes and Development Program of the Graduate School of Biomedical Sciences, University of Texas M. D. Anderson Cancer Center, Houston, TX, USA
SOURCE: Journal of Virology (2004), 78(20), 10856-10864
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The X gene of hepatitis B virus (HBV) is one of the major factors in HBV-induced hepatocarcinogenesis and is essential for the establishment of productive HBV replication in vivo. Recent studies have shown that the X gene product targets mitochondria and induces **calcium** flux, thereby activating Ca²⁺-dependent signal transduction pathways. However, regulatory mechanisms of X gene expression have remained unclear. Previous studies had localized a minimal promoter activity to a 21-bp GC-rich sequence located 130 bp upstream of the X protein coding region and showed that there was a cellular protein bound to this DNA. Interestingly, the 21-bp sequence identified as an X gene minimal promoter does not contain any previously identified core promoter elements, such as a TATA box. To better understand the mechanisms of transcriptional initiation of the X gene, we set out to biochem. purify the binding protein(s) for the 21-bp DNA. We report here the identification of the X gene minimal promoter-binding activity as nuclear respiratory factor 1 (NRF1), a previously known transcription factor that activates the majority of nucleus-encoded mitochondrial genes and various housekeeping genes. Primer extension analyses of the X mRNAs show that mutations at the binding site specifically inactivate transcription from this promoter and that a dominant-neg. NRF1 mutant and short interfering RNAs inhibit transcription from this promoter. Therefore, NRF1 specifically binds the 21-bp minimal promoter and pos. contributes to transcription of the X gene. Simultaneous activation of the X gene and mitochondrial genes by NRF1 may allow the X protein to target mitochondria most efficiently.

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 2004:639135 CAPLUS
 DOCUMENT NUMBER: 142:131910
 TITLE: Hepatic cell apoptosis was triggered by **HBx** accumulation and independent on verapamil
 AUTHOR(S): Wang, Haiping; Chen, Xiaoping; Bai, Xiangjun
 CORPORATE SOURCE: Department of Surgery, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, 430030, Peop. Rep. China
 SOURCE: Journal of Huazhong University of Science and Technology, Medical Sciences (2004), 24(3), 281-283
 CODEN: JHUSAW; ISSN: 1672-0733
 PUBLISHER: Huazhong University of Science and Technology
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB To study the roles of **HBx** and **calcium** inhibitor verapamil in apoptosis of human normal hepatic cells, L02-off, a pTet-off stably integrated human hepatic cell line was established, in which **HBx** expression was tightly induced by Doxycycline. The effect of different amts. of **HBx** and verapamil on apoptosis of human normal hepatic cells was detected. The study showed that apoptosis was triggered by accumulation of intracellular **HBx**, while verapamil had no effects on the apoptotic process. It was concluded that apoptosis mediated by **HBx** was dose-dependent but **calcium**-independent.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 2004:567220 CAPLUS
 DOCUMENT NUMBER: 141:290790
 TITLE: Screening of lymphocyte proteins interacting with hepatitis B virus X antigen by yeast-two hybrid technique
 AUTHOR(S): Liang, Yaodong; Cheng, Jun; Li, Qiang; Wang, Lin; Lu, Yinying; Wu, Jun; Cheng, Mingliang
 CORPORATE SOURCE: Institute of Infectious Diseases, The 302 Hospital of PLA, Beijing, 100039, Peop. Rep. China
 SOURCE: Shijie Huaren Xiaohua Zazhi (2003), 11(12), 1866-1869
 CODEN: SHXZF2; ISSN: 1009-3079
 PUBLISHER: Shijie Weichangbingxue Zazhishe
 DOCUMENT TYPE: Journal
 LANGUAGE: Chinese

AB Methods: The hepatitis B virus X antigen (HBxAg) gene was amplified by polymerase chain reaction (PCR) and HBxAg bait plasmid was constructed by using yeast-two hybrid system 3, then transformed into yeast AH109. The transformed yeast mated with yeast Y187 containing lymphocytes cDNA library plasmid in 2+YPDA medium. Diploid yeast was plated on synthetic dropout nutrient medium (SD/-Trp-Leu-His-Ade) and synthetic dropout nutrient medium (SD/-Trp-Leu-His-Ade) containing X- α -gal for selecting two times and screening. After extracting and sequencing of plasmid from blue colonies, we underwent anal. by bioinformatics. Results: A total of 50 colonies were sequenced. Among them, 20 colonies were eukaryotic translation elongation factor 2, 1 eukaryotic translation elongation factor 1, 2 eukaryotic translation initiation factor 3, 2 protein MTGR1a, 1 myeloid associated differentiation protein, 1 myeloid differentiation primary response protein MYD116, 1 CTCL tumor antigen HD-CL-08, 3 MHC class Ib antigen (HLA-E), 1 leukocyte antigen CD37, 1 aCLL-associated antigen KW-6, 1 lymphocyte function-associated antigen 1, 1 growth arrest and DNA-damage-inducible 34, 2 transcript variant 1, 1 protein phosphatase 1, regulatory inhibitor subunit 15 A, 1 cytidine deaminase, 1 macrophage lectin 2 (**calcium** dependent) (HML2), 3 KIAA1949 protein, 1 urokinase-type plasminogen activator receptor, 3 GDP dissociation inhibitor, 1 chondroitin 4-sulfotransferase, 1 zinc finger protein, subfamily 1A and a new gene with unknown function. Conclusion: Genes of HBxAg-interacting proteins in lymphocytes are successfully cloned and the results bring some new clues for studying the biol. functions of HBxAg and associated proteins.

L28 ANSWER 10 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:760736 CAPLUS
DOCUMENT NUMBER: 139:349012
TITLE: Activation of **calcium** signaling by hepatitis
B virus-X protein in liver cells
AUTHOR(S): Oh, Jane C.; Jeong, Deuk-Lim; Kim, In-Kyung; Oh,
Sang-Hwan
CORPORATE SOURCE: Department of Biochemistry, College of Medicine, The
Catholic University of Korea, Seoul, 137-701, S. Korea
SOURCE: Experimental and Molecular Medicine (2003), 35(4),
301-309
CODEN: EMMEF3; ISSN: 1226-3613
PUBLISHER: Korean Society of Medical Biochemistry and Molecular
Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Hepatitis B virus x gene product (**HBx**) is known to be a
transactivator of transcriptional elements that regulate the expression of
a variety of genes associated with the growth, differentiation, survival and
the apoptosis of cells. However, the exact mechanism of the activation
and inhibition of cellular events by **HBx** remains uncertain. The
present study was designed to measure the effect of **HBx**, on the
signal transduction pathways associated with intracellular Ca²⁺ mobilization
following **HBx** transfection in the stable Chang liver cells
(CHL-X). Enhanced cell proliferation by **HBx** in CHL-X was
confirmed by MTT assay and by the immunodetection of PCNA. The
transactivation of AP-1 by **HBx** induced in CHL-X was inhibited by
cyclosporin A (CsA), a mitochondrial Ca²⁺ channel blocker and by BAPTA-AM,
a cytosolic Ca²⁺ blocker. Activation of the SAPK/JNK signaling pathway by
HBx was evidenced by the increased phosphorylations of c-Jun
(Ser63) and of JNK (Thr183/Tyr185). Increased phospho-Erk/Erk and
phospho-Raf1/Raf in **HBx**-induced CHL-X indicated that **HBx**
might stimulate the MAPK pathway. PI3K activity and cytosolic free Ca²⁺
levels were elevated in **HBx**-induced CHL-X. These results imply
that **HBx** transactivates both JNK and MAPK signal transduction
pathways in association with the mobilization of cytosolic Ca²⁺.

REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 11 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:647468 CAPLUS
DOCUMENT NUMBER: 139:228404
TITLE: Caspase-dependent Alterations of Ca²⁺ Signaling in the
Induction of Apoptosis by Hepatitis B Virus X Protein
AUTHOR(S): Chami, Mounia; Ferrari, Davide; Nicotera, Pierluigi;
Paterlini-Brechot, Patrizia; Rizzuto, Rosario
CORPORATE SOURCE: Section of General Pathology and Interdisciplin
Center for the Study of Inflammation, Department of
Experimental and Diagnostic Medicine, Ferrara,
I-44100, Italy
SOURCE: Journal of Biological Chemistry (2003), 278(34),
31745-31755
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular
Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The hepatitis B virus X protein (**HBx**) is a multifunctional
protein, acting on different targets (e.g. transcription factors,
cytoplasmic kinases, and mitochondrial proteins) and exerting cellular
effects as diverse as stimulation of cell proliferation and apoptosis. In
its biol. effects, the modulation of cellular Ca²⁺ signals has been
proposed to be involved, but the direct assessment of Ca²⁺ homeostasis in
HBx-transfected cells has not been carried out yet. In this work,
we have employed for this purpose aequorin-based recombinant probes
specifically targeted to intracellular organelles and microdomains. Using
these probes, we observed that overexpression of **HBx** enhanced
agonist-evoked cytosolic Ca²⁺ signals in HepG2 and HeLa cells, without
affecting either the steady state of endoplasmic reticulum Ca²⁺ concentration or

the kinetics of Ca²⁺ release. Rather, caspase-3-dependent cleavage of the plasma membrane Ca²⁺ ATPase could be demonstrated, and larger rises were detected in the cytoplasmic rim beneath the plasma membrane. In mitochondria, major morphol. (fragmentation and swelling) and functional (reduced Ca²⁺ uptake) alterations were detected in **HBx**-expressing cells. As to the cellular consequences, we observed that **HBx**-induced apoptosis was markedly reduced when the alterations in Ca²⁺ signaling (e.g. by loading a Ca²⁺ chelator or preventing PMCA cleavage) or the downstream effects (e.g. by inhibiting mitochondrial permeability transition) were prevented. Overall, these results indicate that **HBx** perturbs intracellular Ca²⁺ homeostasis, acting on the extrusion mechanisms, and that this effect plays an important role in the control of **HBx**-related apoptosis.

REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 12 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:526751 CAPLUS

DOCUMENT NUMBER: 139:173263

TITLE: Activation and inhibition of cellular **calcium** and tyrosine kinase signaling pathways identify targets of the **HBx** protein involved in hepatitis B virus replication

AUTHOR(S): Bouchard, Michael J.; Puro, Robyn J.; Wang, Lihua; Schneider, Robert J.

CORPORATE SOURCE: Department of Microbiology, New York University School of Medicine, New York, NY, 10016, USA

SOURCE: Journal of Virology (2003), 77(14), 7713-7719
CODEN: JOVIAM; ISSN: 0022-538X

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Human hepatitis B virus (HBV) **HBx** protein is a multifunctional protein that activates cellular signaling pathways and is thought to be essential for viral infection. Woodchuck HBV mutants that lack **HBx** are unable to replicate in vivo or are severely impaired. HBV replication in HepG2 cells, a human hepatoblastoma cell line, is stimulated 5- to 10-fold by **HBx** protein. We have utilized the HepG2, **HBx**-dependent HBV replication system to study the effects of activators and inhibitors of cytosolic **calcium** and tyrosine kinase signaling pathways on viral replication. By transfecting either a wild-type HBV genome or an HBV genome that does not express **HBx** and then treating transfected cells with activators or inhibitors of signaling pathways, we identified compds. that either impair wild-type HBV replication or rescue **HBx**-deficient HBV replication. Geldanamycin or herbimycin A, tyrosine kinase inhibitors, blocked HBV replication. Derivs. of cyclosporine, i.e., cyclosporine A, cyclosporine H, and SDZ NIM811, which block cytosolic **calcium** signaling and specifically the mitochondrial permeability transition pore (SDZ NIM811), also impaired HBV replication. Treatment of cells with compds. that increase cytosolic **calcium** levels by a variety of mechanisms rescued replication of an **HBx**-deficient HBV mutant. Transcription of viral RNA and production of viral capsids were only minimally affected by these treatments. These results define a functional signaling circuit for HBV replication that includes **calcium** signaling and activation of cytosolic signaling pathways involving Src kinases, and they suggest that these pathways are stimulated by **HBx** acting on the mitochondrial transition pore.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 13 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:208233 CAPLUS

DOCUMENT NUMBER: 139:33003

TITLE: Regulation of Gal β 1, 3GalNAc α 2, 3-sialyltransferase by Hepatitis B Virus MHBs/**HBx** transactivator

AUTHOR(S): Ding, Huiping; Wang, Junqi; Jin, Cheng

CORPORATE SOURCE: State Key Laboratory of Microbial Resources, Institute

of Microbiology, Chinese Academy of Sciences, Beijing,
100080, Peop. Rep. China

SOURCE: Shengwu Gongcheng Xuebao (2002), 18(5), 551-555
CODEN: SGXUED; ISSN: 1000-3061
PUBLISHER: Kexue Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB Hepatitis B virus MHBst and **HBx** fragments were amplified to construct eukaryotic expression vector pCDNA3.1-MH-Bst and pCDNA3.1-**HBx**. ST3GalI promoter region was obtained by the method of PCR and GFP report plasmid pEGFP-N1-Psial was constructed. pCDNA3.1-MHBst or pCDNA3.1-**HBx** with pEGFP-N1-Psial were transiently co-transfected into QGY-7701 cells using calcium phosphate-DNA co-precipitation, resp. The expressions of Psial-directed GFP were analyzed by FAC-Scalibur. It was found that MHBst/**HBx** could upregulate ST3GalI promoter activity by 35.2% and 43.8%, resp. The regulation of ST3GalI by MHBst and **HBx** trans-activators was reported. It would be helpful to further investigate the relation between hepatitis B virus infection and sialyltransferase expression.

L28 ANSWER 14 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:715719 CAPLUS
DOCUMENT NUMBER: 137:367569
TITLE: Hepatitis B virus X protein activates the p38
mitogen-activated protein kinase pathway in
dedifferentiated hepatocytes
AUTHOR(S): Tarn, Chi; Zou, Lin; Hullinger, Ronald L.; Andrisani,
Ourania M.
CORPORATE SOURCE: Department of Basic Medical Sciences, Purdue
University, West Lafayette, IN, 47907-1246, USA
SOURCE: Journal of Virology (2002), 76(19), 9763-9772
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Hepatitis B virus X protein (pX) is implicated in hepatocarcinogenesis by an unknown mechanism. Employing a cellular model linked to pX-mediated transformation, we investigated the role of the previously reported Stat3 activation by pX in hepatocyte transformation. Our model is composed of a differentiated hepatocyte (AML12) 3pX-1 cell line that undergoes pX-dependent transformation and a dedifferentiated hepatocyte (AML12) 4pX-1 cell line that does not exhibit transformation by pX. We report that pX-dependent Stat3 activation occurs only in non-pX-transforming 4pX-1 cells and conclude that Stat3 activation is not linked to pX-mediated transformation. Maximum Stat3 transactivation requires Ser727 phosphorylation, mediated by mitogenic pathway activation. Employing dominant neg. mutants and inhibitors of mitogenic pathways, we demonstrate that maximum, pX-dependent Stat3 transactivation is inhibited by the p38 mitogen-activated protein kinase (MAPK)-specific inhibitor SB 203580. Using transient-transreporter and in vitro kinase assays, we demonstrate for the first time that pX activates the p38 MAPK pathway only in 4pX-1 cells. PX-mediated Stat3 and p38 MAPK activation is Ca²⁺ and c-Src dependent, in agreement with the established cellular action of pX. Importantly, pX-dependent activation of p38 MAPK inactivates Cdc25C by phosphorylation of Ser216, thus initiating activation of the G2/M checkpoint, resulting in 4pX-1 cell growth retardation. Interestingly, pX expression in the less differentiated hepatocyte 4pX-1 cells activates signaling pathways known to be active in regenerating hepatocytes. These results suggest that pX expression in the infected liver effects distinct mitogenic pathway activation in less differentiated vs. differentiated hepatocytes.

REFERENCE COUNT: 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 15 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:629912 CAPLUS
DOCUMENT NUMBER: 137:215682
TITLE: The Hepatitis B Virus X Protein Binds to and Activates
the NH2-Terminal trans-Activation Domain of Nuclear

Factor of Activated T Cells-1
AUTHOR(S): Carretero, Marta; Gomez-Gonzalo, Marta; Lara-Pezzi, Enrique; Benedicto, Ignacio; Aramburu, Jose; Martinez-Martinez, Sara; Redondo, Juan Miguel; Lopez-Cabrera, Manuel
CORPORATE SOURCE: Unidad de Biologia Molecular, Hospital Universitario de la Princesa, Madrid, 28006, Spain
SOURCE: Virology (2002), 299(2), 288-300
CODEN: VIRLAX; ISSN: 0042-6822
PUBLISHER: Elsevier Science
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We have previously reported that the hepatitis B virus X protein (HBx) activates nuclear factor of activated T cells (NF-AT), a key regulator of the immune system, by a calcium/calcineurin-dependent pathway, involving dephosphorylation and nuclear translocation of this transcription factor. In addition, we showed that HBx synergizes with potent calcium-mobilizing stimuli to activate NF-AT-dependent transcription, suggesting that addnl. mechanisms might also be operative in the activation of NF-AT by HBx. Here we demonstrate that HBx activates the NH2-terminal transcription activation domain (TAD) of NF-AT1 by a mechanism involving protein-protein interaction. Targeting of HBx to the nucleus did not affect its ability to induce the transcriptional activity of NF-AT1. In contrast, mutations of HBx affecting its functional interaction with general transcription factors abrogated the HBx-induced activity of NF-AT1. Together, these results indicate that HBx may exert its function by acting as a nuclear coactivator of NF-AT1.

REFERENCE COUNT: 72 THERE ARE 72 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:294165 CAPLUS
DOCUMENT NUMBER: 136:304036
TITLE: Inhibition of the Src kinase family pathway as a method of treating HBV infection and hepatocellular carcinoma
INVENTOR(S): Schneider, Robert J.; Klein, Nicola
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 37 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002045191	A1	20020418	US 2001-955006	20010917
PRIORITY APPLN. INFO.:			US 2000-232892P	P 20000915

AB The present invention relates to therapeutic protocols and pharmaceutical compns. designed to target HBx mediated activation of Src kinase, members of the Src tyrosine kinase family and components of the Src kinase family signal transduction pathways for the treatment of HBV (hepatitis B virus) infection and related disorders and diseases, such as hepatocellular carcinoma (HCC). The invention further relates to pharmaceutical compns. for the treatment of HBV infection targeted to HBx and its essential activities required to sustain HBV replication. The invention is based, in part, on the Applicants' discovery that activation of Src kinase signaling cascades play a fundamental role in mammalian hepadnavirus replication. Applicants have demonstrated that HBx mediates activation of the Src family of kinases and that this activation is a critical function provided by HBx for mammalian hepadnavirus replication.

L28 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:915911 CAPLUS
DOCUMENT NUMBER: 136:197934
TITLE: Calcium signaling by HBx protein

in hepatitis B virus DNA replication
AUTHOR(S): Bouchard, Michael J.; Wang, Li-Hua; Schneider, Robert J.
CORPORATE SOURCE: Department of Microbiology, New York University School of Medicine, New York, NY, 10016, USA
SOURCE: Science (Washington, DC, United States) (2001), 294(5550), 2376-2378
CODEN: SCIEAS; ISSN: 0036-8075
PUBLISHER: American Association for the Advancement of Science
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Hepatitis B virus (HBV) infects more than 300 million people and is a leading cause of liver cancer and disease. The HBV **HBx** protein is essential for infection; **HBx** activation of Src is important for HBV DNA replication. In our study, **HBx** activated cytosolic **calcium**-dependent proline-rich tyrosine kinase-2 (Pyk2), a Src kinase activator. **HBx** activation of HBV DNA replication was blocked by inhibiting Pyk2 or **calcium** signaling mediated by mitochondrial **calcium** channels, which suggests that **HBx** targets mitochondrial **calcium** regulation. Reagents that increased cytosolic **calcium** substituted for **HBx** protein in HBV DNA replication. Thus, alteration of cytosolic **calcium** was a fundamental requirement for HBV replication and was mediated by **HBx** protein.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 18 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:459407 CAPLUS

DOCUMENT NUMBER: 133:175358

TITLE: Hepatitis B virus-related insertional mutagenesis implicates SERCA1 gene in the control of apoptosis

AUTHOR(S): Chami, Mounia; Gozuacik, Devrim; Saigo, Kenichi; Capiod, Thierry; Falson, Pierre; Lecoœur, Herve; Urashima, Tetsuro; Beckmann, Jack; Gougeon, Marie-Lyse; Claret, Michel; Le Maire, Marc; Brechot, Christian; Paterlini-Brechot, Patrizia

CORPORATE SOURCE: U-370 INSERM, Necker Institute, Paris, 75015, Fr.

SOURCE: Oncogene (2000), 19(25), 2877-2886

CODEN: ONCNES; ISSN: 0950-9232

PUBLISHER: Nature Publishing Group

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We have used the Hepatitis B Virus DNA genome as a probe to identify genes clonally mutated in vivo, in human liver cancers. In a tumor, HBV-DNA was found to be integrated into the gene encoding Sarco/Endoplasmic Reticulum **Calcium** ATPase (SERCA), which pumps **calcium**, an important intracellular messenger for cell viability and growth, from the cytosol to the endoplasmic reticulum. The HBV X gene promoter cis-activates chimeric HBV X/SERCA1 transcripts, with splicing of SERCA1 exon 11, encoding C-terminally truncated SERCA1 proteins. Two chimeric HBV X/SERCA1 proteins accumulate in the tumor and form dimers. In vitro analyses have demonstrated that these proteins localize to the ER, determine its **calcium** depletion and induce cell death. We have also shown that these biol. effects are related to expression of the SERCA, rather than of the viral moiety. This report involves for the first time the expression of mutated SERCA proteins in vivo in a tumor cell proliferation and in vitro in the control of cell viability.

REFERENCE COUNT: 71 THERE ARE 71 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:351559 CAPLUS

DOCUMENT NUMBER: 133:3713

TITLE: Generation of antibodies using polynucleotide vaccination in avian species

INVENTOR(S): Duan, Lingxun

PATENT ASSIGNEE(S): Genway Biotech, Inc., USA

SOURCE: PCT Int. Appl., 83 pp.

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

CODEN: PIXXD2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000029444	A1	20000525	WO 1999-US26843	19991112
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
CA 2350111	AA	20000525	CA 1999-2350111	19991112
BR 9915732	A	20010904	BR 1999-15732	19991112
EP 1133523	A1	20010919	EP 1999-961658	19991112
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
JP 2002532066	T2	20021002	JP 2000-582429	19991112
PRIORITY APPLN. INFO.:			US 1998-108487P	P 19981116
			WO 1999-US26843	W 19991112

AB The present invention relates to a process for producing antibodies to an antigen in an avian species using polynucleotide vaccination. The present invention also relates to a process for determining the proteomics profile of a set of pre-selected DNA sequences isolated from a bio-sample, preferably the proteomics profile of a human cDNA library. The present invention further relates to a process for identifying physiol. distinguishable markers associated with a physiol. abnormal bio-sample.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:543455 CAPLUS

DOCUMENT NUMBER: 127:149994

TITLE: Vinyl chloride resin-based coextruded decorative materials for building exteriors and their manufacture

INVENTOR(S): Hiratsuka, Yuji; Kadono, Masaki; Wazumi, Masahiro

PATENT ASSIGNEE(S): Kanegafuchi Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09174735	A2	19970708	JP 1995-336393	19951225
PRIORITY APPLN. INFO.:			JP 1995-336393	19951225

AB The decorative materials (sp. gr. 0.3-0.8 g/cc) with good weather resistance and matte appearance are derived by coextrusion of an acrylic resin containing delustering agent (e.g., crosslinked PMMA) and a low-foaming vinyl chloride resin composition that the acrylic layer accounts for 0.1-1 mm thickness.

L28 ANSWER 21 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:652205 CAPLUS

DOCUMENT NUMBER: 125:282231

TITLE: Prediction of substitutional behavior of ternary elements in B2-type NiTi, CoTi, FeTi and NiAl

AUTHOR(S): Hosoda, Hideki; Kamio, Akihiko; Suzuki, Tomoo;

Mishima, Yoshinao

CORPORATE SOURCE: Dep. Meallurgical Eng., Tokyo Inst. Tech., Tokyo, 152, Japan

SOURCE: Nippon Kinzoku Gakkaishi (1996), 60(9), 793-801
CODEN: NIKGAV; ISSN: 0021-4876
PUBLISHER: Nippon Kinzoku Gakkai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB A method is proposed for predicting the substitution behavior of ternary elements (X) in B2-type intermetallic compds. (AB) having substitutional (antistructure) defects at off-stoichiometric compns. Calcns. are carried out using the pseudo-ground state anal. based on the nearest-neighbor, pair-approximation. The results revealed that the site preference of X can be determined by both heat of formation and alloy concentration: X occupies A sites only in case of $\Delta H_{BX} < \Delta H_{AB} + \Delta H_{AX}$ (ΔH_{AB} stands for the heat of formation between A and B), X occupies B sites only in case of $\Delta H_{AX} < \Delta H_{AB} + \Delta H_{BX}$, and in case, X occupies both or either A and/or B sites unfilled by constituent elements depending on alloy concentration. It is shown that: in NiTi, CoTi, and FeTi, most 3A- and 4A-group elements occupy Ti sites only, and most 8A-, 4B- and 5B-group elements occupy Ni, Co, and Fe sites only; while in NiAl, Co, Rh etc. occupy Ni sites only, and Si occupy Al sites only. These results are in good agreement with available data in the literature.